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UNIT 4
CARS

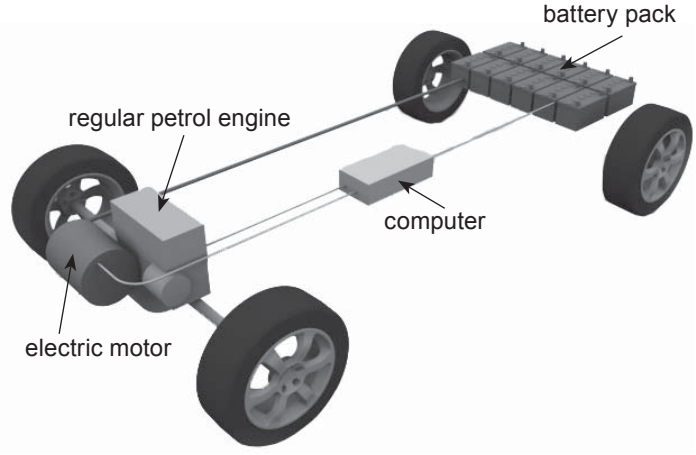
☛ Get ready

1. Have you ever hitchhiked?
2. What do you consider to be most important when buying a car?
3. What kind and brand of car would you like to have?

A Hybrid Cars

There are a lot of models of hybrid cars on the market. Nearly every manufacturer has their own models. These cars have lower fuel consumption and they are also more environment-friendly because they reduce the emissions. A lot of people have some experience with hybrid cars without even realizing it. Some examples of hybrid cars are the moped (motorized pedal bike), most locomotives or submarines. They all have one thing in common. They combine two kinds of power – petrol-engined, diesel--engined, electric power etc. Most cars are petrol-electric hybrids. What is the basic difference between a petrol--powered car and an electric car? Petrol-powered cars have a tank which supplies petrol to the engine. The engine then turns a transmission. The electric motor, on the other hand, has a set of batteries that provides electricity to an electric motor which turns the transmission that turns the wheels.

A typical hybrid car contains these parts: a petrol engine, a fuel tank, an electric motor, generator, batteries and a transmission. The petrol engine is similar to those you know from ordinary cars. The only difference is the size – hybrid cars have smaller engines. This engine produces less emissions but has higher efficiency. The electric motor is very sophisticated; it can work as both the engine and generator. It can draw energy from the batteries to accelerate the car. But acting as a generator, it can slow the car down and return energy to the batteries. Its transmission functions the same way as the one on ordinary cars.



We mentioned that hybrid cars are more efficient. It is because of the smaller size of the engine. A bigger engine is heavier and the car needs more energy to accelerate or drive up a hill. The higher number of cylinders also means that a greater amount of fuel is required. To sum up, having a hybrid car is good both for you because it saves your money and for the environment because it produces less emissions.

amount /əˈmaʊnt/	množství
clutch /klʌtʃ/	spojka
combustion /kəmˈbʌstʃn/	spalování
consumption /kənˈsʌmpʃən/	spotřeba
cylinder /ˈsɪlɪndə/	válec
drive /draɪv/	pohon, náhon, řídit
efficiency /ɪˈfɪʃəntsɪ/	výkonnost
emission /ɪˈmɪʃn/	emise, zplodiny
engine /ˈendʒɪn/	motor
environment /ɪnˈvaɪrənmənt/	životní prostředí
fuel /fjʊəl/	palivo
hybrid /ˈhaɪbrɪd/	hybridní
manufacturer /ˌmænjʊˈfæktʃrə/	výrobce
ordinary /ˈɔːdɪnərɪ/	běžný, obyčejný
petrol /ˈpetrl/	benzín
power /paʊə/	síla, výkon
reduce /rɪˈdjuːs/	snížit
sophisticated /səˈfɪstɪkeɪtɪd/	důmyslný
speed /spiːd/	rychlost
submarine /ˌsʌbməˈriːn/	ponorka
tank /tæŋk/	nádrž
transmission /trænzˈmɪʃn/	převodovka
wheel /wiːl/	kolo

1. Are these sentences true or false?

1 Hybrid cars use more fuel than ordinary cars. ☐
2 There is an electric motor in hybrid cars. ☐
3 A petrol engine has a set of batteries. ☐
4 A smaller engine helps higher efficiency. ☐
5 Hybrid cars are better for the environment than petrol cars. ☐

✔ A little bit of grammar

We use **to** in English to express the purpose of something. In Czech there is **aby**.

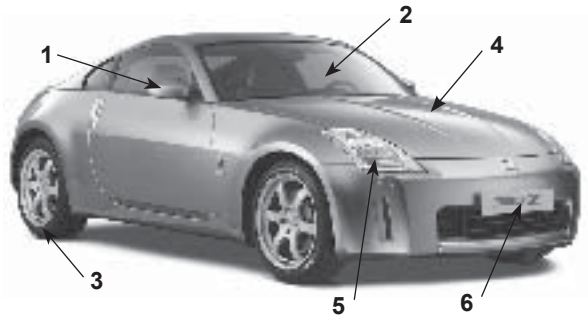
We use scissors to cut the paper.
Používáme nůžky, abychom nastříhali papír.

2. Complete the sentences with the given words.

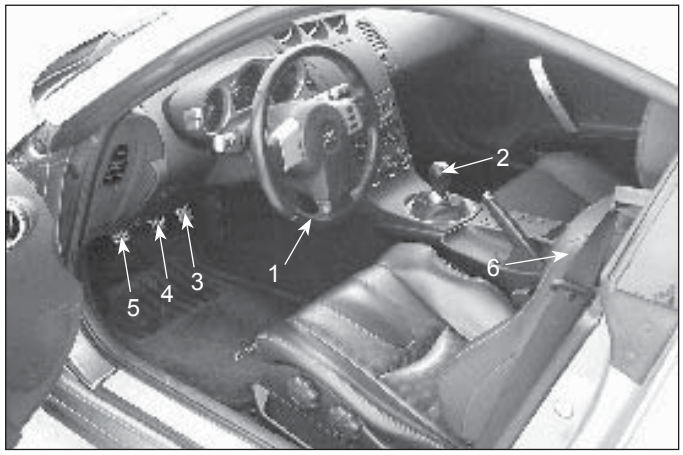
brake clutch windscreen wiper indicators rear-view mirror gear lever steering wheel accelerator

1 Use the _____ to see when it is raining.
2 Use the _____ to change the speed.
3 Use the _____ to turn the car.
4 Use the _____ to stop the car.
5 Use the _____ to see behind your car.
6 Use the _____ to increase the speed of the car.
7 Use the _____ to show that you are going to turn.
8 Step on the _____ to change gear or to stop the car.

3. Label the picture with the words given.



headlight _____
licence plate _____
bonnet/hood _____
tyre _____
windscreen _____
rear-view (side) mirror _____



clutch _____
seatbelt _____
accelerator _____
gear lever _____
steering wheel _____
brake _____

4. Imagine that you would like to drive your car. Put these activities in the correct order.

1 Put in the clutch. _____
2 Indicate. _____
3 Take off the hand brake. _____
4 Put the car in first gear. _____
5 Get into the car. _____
6 Check your rear-view mirror. _____
7 Start the car. _____
8 Put the car into neutral. _____
9 Put the key into the ignition. _____
10 Put on your seatbelt. _____
11 Step on the accelerator and go. _____

5. Read the text about a car accident and fill in the missing words.

overtake got out of brakes insurance rear-view mirror ditch high beams licence plate speed up hoot the horn seatbelts lane windscreen bonnet/hood boot driving licence warning triangle tyre

I was driving home late at night. It was foggy and raining so I had to drive very slowly and carefully. I looked into the (1) _____ and saw a car driving behind me. The driver obviously did not like my slow way of driving and he tried to (2) _____ me. He started to (3) _____ even though we were just going through a narrow part of a road and he could not see properly. Suddenly I saw a car coming towards us. The driver was using (4) _____ so for

a moment we could not see anything. I wanted to (5) _____ but it was too late. The car beside me tried to get back into our (6) _____ . I quickly stepped on the (7) _____ but the car pushed me into the (8) _____ . I could hear the sound of crashing glass and metal plates and then only silence. When I woke up, I realized that I was not seriously injured. I (9) _____ the car and went to check the other drivers. One of them was already outside and was calling for the ambulance. The other driver was not wearing his (10) _____ . He hit the (11) _____ with his head and now he was bleeding. Because the cars were still standing on the road, I opened the (12) _____ of my car, took out the (13) _____ and put it on the road. I checked my car. It was not so bad. I only had some scratches on the (14) _____ and a flat (15) _____ and I lost my (16) _____ somewhere so I will have to get a new one from the police. Soon the ambulance arrived together with the police. They wanted to see my (17) _____ and the (18) _____ . They wrote a report and let me go home. I hope this will not happen to me again.

6. How to change a flat tyre. Cross out the words which you DO NOT need to change a flat tyre.

scissors	screwdriver
jack	glue
toolkit	footpump
sellotape	pressure gauge
chewing gum	handy man

7. Match the verbs on the left with the nouns on the right.

loosen and tighten	the tyre
jack up	clockwise and anticlockwise
lower	the car
remove and put on	the bolts
check	the jack
screw and unscrew	the tyre pressure

8. Using all these instructions try to write your own manual on "How to change a flat tyre":

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

B Traffic Signs

✔ A little bit of grammar

We use **must** to speak about something necessary.
We use **can** to speak about something possible.
We use **mustn't** to speak about something prohibited.

9. What do these traffic signs mean?

1 _____

2 _____

3 _____

4 _____

5 _____

6 _____

7 _____

8 _____

10. Read the text about the function of a four stroke engine.

The four stroke engine is also known as the combustion engine and it is probably the most common engine nowadays. The four stroke cycle used in these engines is sometimes called the Otto cycle because it was first demonstrated by Nikolaus Otto in 1876. The four strokes of the cycle are intake, compression, combustion and exhaust.

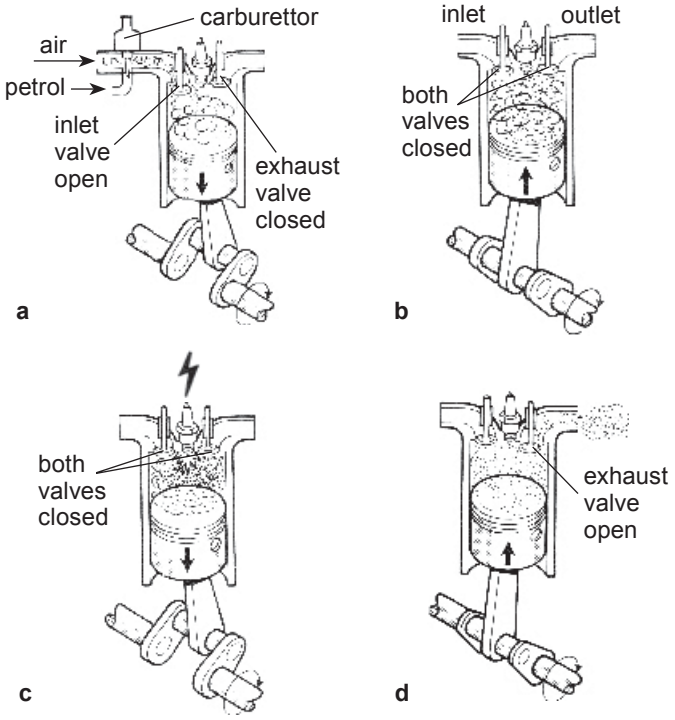
During the intake stroke the air and petrol are mixed together. Then the piston moves down and sucks the mixture into the cylinder through the inlet valve.

The next stroke is called compression. The piston moves up and compresses the mixture.

Next comes the combustion or sometimes this stroke is called ignition, during which the spark plug ignites the compressed mixture. The piston is forced down and makes the crankshaft rotate.

The final stroke is called exhaust. The piston goes up again to push the burnt gases out through the exhaust valve. These four strokes are repeated again and again.

Can you put these pictures in a correct order?



11. Now match the words with their definitions.

piston	an opening through which air, gas or liquid gets inside
intake	the waste gas from an engine
valve	a part in an engine that makes the fuel burn
spark plug	a long metal rod that helps the engine turn the wheel
crankshaft	a piece of metal which moves up and down in the cylinder
exhaust	a device which opens and closes to control the flow of liquids or gases

12. Try to find 10 words connected with cars in this puzzle. All the words can be found in this unit.

I	V	G	R	P	R	E	T	N	W	L
G	E	N	G	I	N	E	F	K	T	E
N	B	O	O	T	H	M	A	Q	J	U
I	B	W	T	X	S	L	H	P	E	F
T	I	L	N	D	P	E	S	Q	O	D
I	Y	E	R	S	E	E	K	O	Z	B
O	Z	I	U	F	E	H	N	C	B	Z
N	V	A	T	F	D	W	A	V	G	Q
E	N	X	G	K	L	V	R	O	G	M
N	L	R	T	W	K	C	C	A	I	G
R	C	I	V	A	L	V	E	O	Q	D

➤ Get further

1. What are the differences between these types of cars?
   - SUV (four-wheel drive)
   - truck
   - family car
   - RV
   - limousine
   - sports car
   - racing car

   Choose one, describe it, say who would use it. The rest of the class will guess.

2. Write an advertisement to sell a car or find one in a newspaper and translate it.